

CLAIM LISTING

1-16 Canceled

17. (New) A clamping or braking device comprising:

a housing having a stop area;

at least one plate-like element held in the housing and supported with a first end with respect to the stop area of the housing, the plate-like element for transferring clamping or braking forces with a second end to an object;

wherein a pressure space is formed between the convex side of the at least one bending area of the at least one plate-like element and the housing and the pressure space can be acted on with excess pressure of a pressure medium which can be supplied to the housing;

wherein the plate-like element has at least one bending area which is convex in a starting state, which is pressure-resistant and nevertheless elastically deformable so that the bending area forms an elastic element between the stop area of the housing and the second end of the plate-like element;

wherein the at least one plate-like element is so constructed that when the pressure space is acted on with excess pressure, a movement of the second end of the at least one plate-like element takes place in the direction of the object as a result of a reduction of the curvature of the bending area; or an increase in the clamping or braking forces which can be transferred to the object by second end of the plate-like element is brought about;

1 wherein the at least one plate-like element includes either a) radial slits which open
2 inwardly, wherein the second end of the plate-like element is formed by the inside end of
3 the plate-like element; or b) radial slits which open outwardly, wherein the second end of
4 the plate-like element is formed by the outside end of the plate-like element; and
5 one or more sealing elements disposed along the surface of the at least one plate-like
6 element, at least in the area of the radial slits, inside or outside, relative to the pressure
7 space.

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9 18. (New) The device of claim 17 wherein the first end of the at least one plate-like element
10 is connected to the housing.

11 19. (New) The device of claim 17 wherein the first end of the at least one plate-like element
12 is supported against the housing.

13 20. (New) The device of claim 17 wherein the at least one plate-like element is constructed
14 in the shape of a circular ring.

15 21. (New) The device of claim 20 wherein the ring-shaped, plate-like element is constructed
16 convex, in the starting state, over essentially the entire radial cross section, wherein
17 essentially an entire ring-shaped wall of the ring-shaped, plate-like element serves as a
18 bending area.

1 22. (New) The device of claim 21 wherein the one or more sealing elements are constructed
2 in the form of a deformable layer on at least part of the surface of the ring-shaped, plate-
3 like element.

4 23. (New) The device of claim 17 wherein the at least one plate-like element is constructed
5 in such a way as to limit the bending of the at least one bending area in such a way that
6 after discontinuation of pressure space pressurization with excess pressure, as the result
7 of the elastic effect of at least one bending area, the bending area is moved back to the
8 starting state.

9 24. (New) The device of claim 17 wherein several plate-like elements are provided, whose
10 second ends have a predetermined interval, in order to transfer clamping or braking
11 forces to the object over a prespecified expanded area, and wherein for each plate-like
12 element, a separate pressure space or for several or all plate-like elements, a common
13 pressure space is constructed.

14 25. (New) The device of claim 17 wherein at least one pair of plate-like elements is
15 provided, whose first and second ends are directly adjacent or are at a close distance to
16 one another and their bending areas are constructed to bend convex outwardly, relative to
17 the other plate-like element of the pair, and wherein a common pressure space is provided
18 for the pressurization of the bending areas of the two plate-like elements of the pair.

1 26. (New) The device of claim 25 wherein the plate-like elements are constructed in such a
2 manner that they lie close to one another, in an ending state characterized by
3 pressurization at an excess pressure which is greater or equal to a prespecified maximum
4 pressure, with at least one partial surface area of the plate-like elements' respective
5 bending areas facing one another, wherein the ending state is characterized by a suitable
6 formation of the bending areas in such a manner that an automatic return from the ending
7 state to the pressure-less starting state takes place upon removal of the excess pressure.

8 27. (New) A clamping or braking device comprising:
9 a housing having a stop area;
10 at least one plate-like element held in the housing and supported with a first end with
11 respect to the stop area of the housing, the plate-like element for transferring clamping or
12 braking forces with a second end to a pressurizable element, the pressurizable element for
13 transferring the clamping or braking forces to an object;
14 wherein a pressure space is formed between the convex side of the at least one bending
15 area of the at least one plate-like element and the housing and the pressure space can be
16 acted on with excess pressure of a pressure medium which can be supplied to the
17 housing;
18 wherein the plate-like element has at least one bending area which is convex in a starting
19 state, which is constructed pressure-resistant and nevertheless elastically deformable so
20 that the bending area forms an elastic element between the stop area of the housing and
21 the pressurizable element;

1 wherein the at least one plate-like element is so constructed that when the pressure space
2 is acted on with excess pressure provided to attain or increase clamping or braking forces,
3 a movement of the second end of the at least one plate-like element takes place in the
4 direction of the pressurizable element as a result of a reduction of the curvature of the
5 bending area; or an increase in the clamping and/or braking forces, which can be
6 transferred to the object by pressurizable element, is brought about;

7 wherein the at least one plate-like element includes either a) radial slits which open
8 inwardly, wherein the second end of the plate-like element is formed by the inside end of
9 the plate-like element; or b) radial slits which open outwardly, wherein the second end of
10 the plate-like element is formed by the outside end of the plate-like element; and
11 one or more sealing elements disposed along the surface of the at least one plate-like
12 element, at least in the area of the slits, inside or outside, relative to the pressure space.

- 13 28. (New) The device of claim 27 wherein the pressurizable element is constructed as either
14 a) one piece with the housing and as a part of the housing, or b) a part connected to the
15 housing in a detachable manner, wherein the pressurizable element is constructed
16 deformable in such a way that with a pressurization of the pressure space, a movement of
17 at least one section of the pressurizable element takes place in the direction of the object
18 or the transferrable clamping or braking forces, which were produced by the at least one
19 plate-like element, are transferred to the object.

1 29. (New) The device of claim 27, wherein the first end of the at least one plate-like element
2 is connected to the housing.

3 30. (New) The device of claim 27, wherein the first end of the at least one plate-like element
4 is supported, without a firm connection, against the housing, and the second end of the at
5 least one plate-like element is supported, without a firm connection, against the
6 pressurizable element.

7 31. (New) The device of claim 27 wherein the at least one plate-like element is constructed
8 in the shape of a circular ring.

9 32. (New) The device of claim 31 wherein the ring-shaped, plate-like element is constructed
10 convex, in the starting state, over essentially the entire radial cross section, wherein
11 essentially an entire ring-shaped wall of the ring-shaped, plate-like element serves as a
12 bending area.

13 33. (New) The device of claim 32 wherein the one or more sealing elements are constructed
14 in the form of a deformable layer on at least part of the surface of the ring-shaped, plate-
15 like element.

16 34. (New) The device of claim 27 wherein the at least one plate-like element is constructed
17 in such a way as to limit the bending of the at least one bending area in such a way that
18 after discontinuation of pressure space pressurization with excess pressure, as the result

1 of the elastic effect of at least one bending area, the bending area is moved back to the
2 starting state.

3 35. (New) The device of claim 27 wherein several plate-like elements are provided, whose
4 second ends have a predetermined interval, in order to transfer clamping or braking
5 forces to the object over a prespecified expanded area, and wherein for each plate-like
6 element, a separate pressure space or for several or all plate-like elements, a common
7 pressure space is constructed.

8 36. (New) The device of claim 35 wherein the pressurizable element is constructed rigidly in
9 the entire area in which the several plate-like elements are active.

10 37. (New) The device of claim 27 wherein at least one pair of plate-like elements is
11 provided, whose first and second ends are directly adjacent or are at a close distance to
12 one another and their bending areas are constructed to bend convex outwardly, relative to
13 the other plate-like element of the pair, and wherein a common pressure space is provided
14 for the pressurization of the bending areas of the two plate-like elements of the pair.

15 38. (New) The device of claim 27 wherein the plate-like elements are constructed in such a
16 manner that they lie close to one another, in an ending state characterized by
17 pressurization at an excess pressure which is greater or equal to a prespecified maximum
18 pressure, with at least one partial surface area of the plate-like elements' bending areas
19 facing one another, wherein the ending state is characterized by a suitable formation of

- 1 the bending areas in such a manner that an automatic return from the ending state to the
- 2 pressure-less starting state takes place upon removal of the excess pressure.